

Uncovering Why Customers Leave: Bank Churn Analysis

A snapshot of the story: Visualizing why bank customers churn using Power BI.

The Story Begins: Why This Matters

Imagine a bank losing one in every five customers—20.37% to be exact. That's the challenge I tackled in this project, diving into a dataset of 10,000 bank customers to understand why 2,037 of them ended their relationship with the bank. Using Power BI, I set out to uncover patterns and provide actionable insights to help the bank retain more customers.

Project Overview

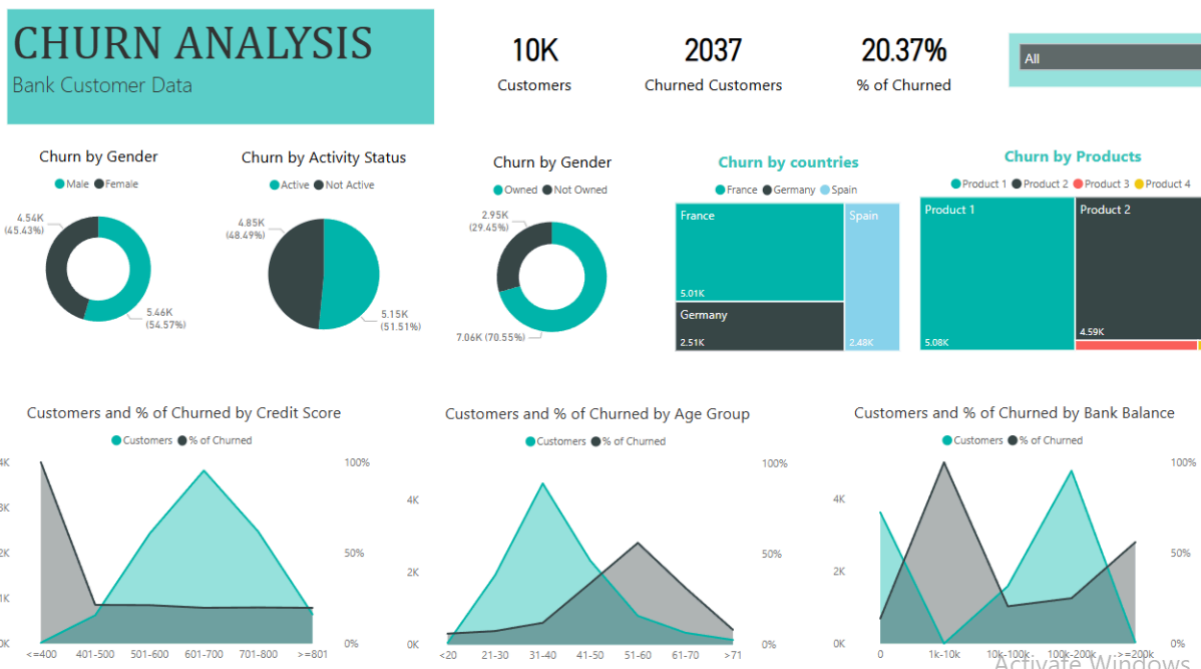
This data analysis project investigates customer churn patterns for a multinational bank with 10,000 customers across France, Germany, and Spain. With a concerning 20.37% overall churn rate (2,037 customers), this analysis identifies key risk factors driving customer departures and provides actionable recommendations to improve retention strategies. Using Power BI for comprehensive visualization and analysis, this project transforms raw customer data into strategic insights for targeted retention initiatives.

Business Problem

Customer churn represents a significant challenge for banks, directly impacting revenue stability and growth potential. Each departing customer carries substantial costs:

- Lost future revenue streams
- Higher acquisition costs for replacement customers (5-25x more expensive than retention)
- Potential negative word-of-mouth affecting brand reputation

This analysis aims to identify specific customer segments at highest risk, understand behavioral patterns preceding churn, and develop data-driven retention strategies to reduce the 20.37% churn rate.



The Quest: Project Goals

My mission was clear: identify the key drivers of churn and empower the bank with insights to act on.

- Pinpoint the main factors (e.g., gender, age, products) driving customer churn.
- Build an interactive Power BI dashboard to visualize churn patterns.
- Deliver recommendations to reduce churn and improve customer retention.

Tools of the Trade

I relied on a single, powerful tool to bring this story to life.

- **Power BI:** For data analysis, interactive visualizations, and dashboard creation.

The Raw Material: Data Sources

The dataset was the foundation of this journey, providing a wealth of customer information.

- **Source:** Bank customer dataset (assumed from a public source or mock data).
- **Size:** 10,000 customers, with details on churn status and demographics.
- **Key Elements:** Gender, age, activity status, country, products owned, credit score, and bank balance.

The Journey: How I Solved It

I approached this project like a detective, piecing together clues to solve the churn mystery.

1. **Gathering the Pieces:**

- Started with a dataset of 10,000 bank customers, including churn status and demographic details.
- Loaded the data into Power BI for analysis.

2. **Cleaning the Canvas:**

- Ensured data consistency by checking for missing values or outliers in Power BI.
- Standardized fields like age groups and product categories for analysis.

3. **Finding the Patterns:**

- Explored churn across multiple dimensions: gender, activity status, country, products, credit score, age, and bank balance.
- Used Power BI's visuals to identify trends, like higher churn among inactive customers (70.55%).

4. **Crafting the Solution:**

- Built an interactive Power BI dashboard with donut charts and histograms to display churn by category.
- Added filters for stakeholders to drill down into specific segments (e.g., by country or age group).

5. **Telling the Story:**

- Highlighted key insights, such as the high churn rate among younger customers (21-30 age group) and those with low credit scores (<400).
- Recommended targeted strategies to address these patterns.

The Outcome: Impact and Insights

The dashboard revealed critical insights that could help the bank take action.

- **High Churn Among Inactive Customers:** 70.55% of churned customers were inactive, suggesting a need for re-engagement campaigns.
- **Age Matters:** The 21-30 age group showed higher churn, possibly due to unmet financial needs for younger clients.
- **Credit Score Impact:** Customers with credit scores below 400 were more likely to churn (up to 100% churn rate in that bracket).
- **Country Variations:** Germany had the highest churn rate among countries (5,010 customers), indicating regional challenges.
- Delivered a Power BI dashboard that stakeholders can use to explore churn patterns interactively.

Recommendations

1. Targeted Retention Programs

- Develop specific retention initiatives for the 31-50 age demographic
- Create re-engagement campaigns for inactive accounts showing early warning signs
- Implement specialized retention strategies for both low-balance and high-value account holders

2. Product Enhancement

- Conduct comprehensive review of Product 2 features, pricing, and user experience
- Develop customer feedback mechanisms to identify specific pain points
- Consider product modifications or enhanced value propositions

3. Geographic Strategy Adjustments

- Prioritize retention efforts in the French market where churn is highest
- Analyze competitive landscape in France to identify market-specific challenges
- Develop country-specific retention strategies addressing local customer needs

4. Proactive Risk Management

- Implement an early warning system using predictive analytics to flag at-risk accounts
- Create intervention protocols for accounts showing multiple risk factors
- Develop specialized outreach for non-homeowners, potentially with tailored financial products

5. Customer Experience Improvements

- Review touchpoints for inactive customers to improve engagement
- Develop enhanced onboarding for the identified high-risk segments
- Create specialized relationship management protocols for the 100K-200K balance segment

Implementation Plan

1. **Short-term actions** (0-3 months):
 - Launch re-engagement campaign for inactive accounts
 - Begin Product 2 customer satisfaction survey
 - Implement dashboard monitoring for early churn indicators
2. **Medium-term initiatives** (3-6 months):
 - Redesign customer journey for high-risk segments

- Develop tailored retention offerings for the French market
 - Launch enhanced features for Product 2
 - 3. **Long-term strategy** (6-12 months):
 - Implement a predictive churn model based on identified patterns
 - Develop a comprehensive loyalty program addressing key churn drivers
 - Restructure product offerings based on segment-specific needs
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